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HIND'S Second Comet.

Observations.

BERLIN.

		Berlin M.T.	R.A.	Dec.	
		h m s	° ′ ″	° ′ ″	
1847.	April 24	8 48 22·5	36 25 1·2	+ 32 6 28·0	*Good.*

Elements.

By Mr. W. W. Boreham.

Perihelion Passage, 1847, March 30·26746, Greenwich M.T.

π .... 276° 14′ 42″·3 } Mean Eq.
☊ .... 21 51 46·4 } 1847·0.
i .... 48 39 52·8
Log. q .... 8·6217987. Motion direct.

These elements are calculated on Mr. Hind's observations of February 7 and 26, and March 15.

Calculation—Observation.

$$d\,\alpha''\cos\beta'' = -16''{\cdot}06 \qquad d\,\beta'' = -19''{\cdot}68$$

COLLA'S Comet.

Observations.

VIENNA. (Prof. Littrow.)

		Vienna M. T.	R. A.	Dec.
		h m s	h m s	° ′ ″
1847.	May 15	10 6 44·8	10 2 39·24	+ 38 33 1·8
	16	10 5 1·0	2 25·04	38 48 15·4
	17	9 24 19·6	2 13·13	39 3 58·1
	18	9 35 32·6	10 2 3·77	+ 39 19 29·5

PADUA. (Prof. Santini.)

		Padua M. T.	R. A.	Dec.
		h m s	h m s	° ′ ″
1847.	May 13	13 16 26	10 3 15·45	+ 37 58 28

HAMBURG. (M. Rümker.)

		Hamburg M. T.	R. A.	Dec.
		h m s	° ′ ″	° ′ ″
1847.	May 21	12 50 2	150 27 24·4	+ 40 5 50·8

SOUTH VILLA. (MM. Bishop & Hind.)

		Greenwich M. T.	R. A.	Dec.
		h m s	° ′ ″	° ′ ″
1847.	May 29	10 12 1	150 39 35·7 + 0·783 p	+ 41 47 24·2 + 0·433 p
	30	10 54 4	150 43 17·6 + 0·824 p	41 59 17·7 + 0·497 p

The coefficient of the parallax is given, that the correction due to it may be applied to the observations when the value of p is ascertained from an approximate orbit.

Elements.

By Mr. Hind.

" The following elements appear to be a very close approxi-

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mation to those of the faint comet detected by Professor Colla, at Parma, on the 7th of May:—

Perihelion Passage, 1847, May 30·42763, Greenwich M. T..

Longitude of Perihelion, on the orbit	144° 18′ 15″·5	Mean Eq. 1847·0.
Ascending Node	174 18 38·6	
Inclination	79 3 25·9	
Log. least distance	0·3247018	

Motion retrograde.

"And the co-ordinate constants referred to the true equinox of June, 0 + t days, will be

$$x = r\,[9{\cdot}9979381 + 0{\cdot}30\,t]\ \sin\,(v + 238^\circ\, 54'\, 41''{\cdot}3 + 0''{\cdot}030\,t)$$
$$y = r\,[9{\cdot}3724214 - 6{\cdot}37\,t]\ \sin\,(v + 352\ 39\ 25{\cdot}9 - 0{\cdot}583\,t)$$
$$z = r\,[9{\cdot}9897472 \ldots\ldots\ldots]\ \sin\,(v + 147\ 40\ 50{\cdot}8 + 0{\cdot}070\,t)$$

"The following ephemeris is computed from the above elements for Greenwich Mean Noon:—

1847.	R.A.	Dec.	Time for Aberration.	Horiz. Parallax.
	° ′ ″	° ′ ″	m s	″
May 12	150 56 4·2	+37 33 20·0	15 44·1	4·53
14	150 45 35·1	38 8 48·0	16 1·6	4·45
16	150 37 29·0	38 42 20·8	16 19·0	4·37
18	150 31 42·0	39 14 6·8	16 36·4	4·29
20	150 28 9·6	39 44 14·3	16 53·6	4·22
22	150 26 47·5	40 12 50·7	17 10·7	4·15
24	150 27 31·2	40 40 2·9	17 27·7	4·08
26	150 30 16·5	41 5 57·3	17 44·5	4·01
28	150 34 59·4	41 30 39·9	18 1·0	3·95
30	150 41 36·1	+41 54 16·2	18 17·3	3·89

"Comparing this ephemeris with the observations, I find the errors to be

		$A\alpha \cos\delta$	$A\delta$
		″	″
May 13	Padua............	− 14·6	− 23·0
15	Vienna	− 0·2	......
16	Vienna	0·0	− 0·5
17	Vienna	+ 4·2	− 14·1
18	Vienna	− 0·4	− 6·0
	Hamburg	− 11·5	− 10·4
19	Hamburg	− 23·1	+ 8·5
	South Villa......	− 0·8	− 16·4
20	Dawes.	+ 1·5	+ 0·1
	South Villa......	− 5·7	− 3·7
21	Dawes	− 0·4	+ 12·3
	Berlin............	− 10·9	− 1·9
	Hamburg	− 26·1	− 5·4
23	South Villa ...	+ 14·7	+ 6·7
24	Berlin............	+ 0·9	+ 3·3
25	Dawes	+ 18·4	+ 4·3

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		Δ α cos δ	Δ δ
		″	″
26	Dawes	+ 10·8	− 0·3
	South Villa ...	+ 0·9	+ 16·1
27	Dawes	+ 7·8	+ 9·8
28	Dawes	− 12·2	− 14·3
29	South Villa ...	− 6·8	+ 1·3
30	South Villa ...	− 1·6	+ 1·4

"In the comparison with Mr. Dawes' observations and my own, aberration and parallax are taken into account; in all other observations parallax is neglected, but the aberration is allowed for."

By M. d'Arrest.

Perihelion Passage, 1847, June 6·00465, Berlin M.T.

	° ′ ″	
Longitude of Perihelion	141 0 2·1	} Apparent Equinox.
——— Node	173 54 37·8	
Inclination	79 36 9·7	
Log. q	0·325492	Motion retrograde.

M. d'Arrest has computed his elements from the Hamburg observations of May 18, and the Berlin observations of May 21 and 24. The Berlin observations are,

		Berlin M.T.	R.A.	Dec.
		h m s	° ′ ″	° ′ ″
1847.	May 21	11 51 5·6	150 27 4·7	+40 5 4·6
	24	12 16 15·3	150 27 58·0	+40 46 5·6

By M. Quirling (assistant to M. Rümker).

Perihelion Passage, 1847, June 18·52595, Berlin M.T.

	° ′ ″	
☊	173 26 59	
☊ − π	38 37 5	
Inclination	99 20 23	
Log. q	0·320584	Motion retrograde.

From the Padua observations of May 13, and the Hamburg observations of May 18 and 22.

Sweeping Ephemeris for the expected Comet of 1264 *and* 1556, *on three hypotheses of the time of Perihelion Passage.* From Mr. Hind's Tables in the *Monthly Notice* for April 1847.

		P. P. Aug. 14.		P. P. Sept. 13.		P. P. Oct. 13.	
		h m	° ′	h m	° ′	h m	° ′
1847. July	15	10 15	17 12	9 59	10 12	9 44	+6 58
	25	10 42	18 44	10 21	10 21	10 1	6 52
Aug.	4	11 10	20 45	10 42	10 16	10 21	6 34
	14	11 32	23 27	11 16	10 8	10 44	6 6
	24	11 34	+26 15	11 52	+9 32	11 10	+5 27

On the Opinion of Copernicus with respect to the Light of the Planets. By Professor De Morgan.

"The common story is, that Copernicus, on being opposed by the argument that *Mercury* and *Venus* did not shew phases, answered that the phases would be discovered some day. The first place